

HEATH HEN RESERVATION MAY SAVE FINE GAME BIRDS

Cats and Hawks Greatest Pests on Martha's Vineyard Preserve for Almost Extinct Species

FIGHTING cats and marsh hawks—the cats championed by dozens of kind-hearted women, the hawks protected by statute—William Day is working to preserve and restore to its former abundance the now almost extinct heath hen. Mr. Day is superintendent of the Massachusetts State reservation on the island of Martha's Vineyard, the only heath hen preserve in the world.

The heath hen is described as the originator of the new fangled dances, the first exponent of the turkey trot, the one step and the maxixe. It is a game bird worthy of the attention of sportsmen, once at home in the open lands of New England, New York and New Jersey, and now driven from them to make its last stand for life on this little island off the Massachusetts coast.

The heath hen a hundred years ago might well have been considered the future game bird of New England and the Middle States. It was distributed along the Atlantic seaboard from Cape Ann in Massachusetts to Virginia and it was abundant in the low open lands of Massachusetts, Connecticut and New York, especially on Long Island.

As the settlement of the land and the clearing away of the forests restricted the area of the ruffed grouse, the quail and the partridge, the range of the heath hen was proportionately increased. It was not primarily a forest bird and the opening of the country broadened its feeding ground and increased the supply of seeds and insects. But the bird fell easy prey to the hunter. It was shot and trapped at all seasons and the young were destroyed by dogs and cats. The last specimen recorded from New York was killed in the Comac Hills of Long Island in 1836.

The heath hen had disappeared from the mainland and was relegated to the island of Martha's Vineyard—twenty miles long and six miles wide—before Massachusetts took any measures of protection. Her policy was weak and vacillating and the heath hen rapidly dwindled in numbers. On May 2, 1907, the State Fish and Game Commissioners could find but twenty-one birds on the island.

Those were all the heath hens left in existence. Thus a game bird adapted by nature to New England, even capable of living in a section of the country well settled and open, was on the point of annihilation. Prompt action on the part of a few Vineyarders saved the heath hen from the fate of the passenger pigeon. John E. Hayward, a Vineyard sportsman, was the first to realize the immediate need of action.

Dr. George W. Field, chairman of the Massachusetts Commission on Fisheries and Game, was interested in the situation. He collected funds from bird lovers all over the country and secured a State appropriation. Then a small farm was purchased as a heath hen preserve. Today the State owns 700 acres outright and leases 1,000 acres.

The State reservation lies out in the center of the great plain of Martha's Vineyard. It is four miles to the nearest town. The superintendent's only neighbor is his farm neighbor, who lives a mile away. The plain is covered with scrubby scrub oaks. Here and there a slight ridge of a rolling hill breaks the level contour. The overgrown roads that run through the plain are sandy and hard of passage. No one goes that way except to visit the reservation, and for weeks at a time in winter the little family see no other faces than

their own. Day has been in charge since March, 1913.

In Mr. Day's administration the State reservation has changed completely in appearance. Handicapped by the necessity of economy and by his continual warfare against cats, which he can kill, and hawks, which he can only drive away, Mr. Day has slowly made a new and model farm and the birds under his care have steadily increased. It is estimated that there are now 1,000 of them.

Dr. Field has been the guiding force behind Mr. Day in the work of propagating the heath hen. He has been down on the island at all seasons studying the birds. He has spent hours waiting in the corn fields to take their pictures at close range.

"You sure have some crops," droned Col. J. E. Mercer, with the accent of the South, to which he belongs. Col. Mercer is an officer of the Biological

Survey and one of the foremost authorities on the migration of birds. He visited the reservation late in August to observe the work there. He was standing on the hill which overlooks the reservation. There were ten acres of corn spread out before him—corn that is away ahead of anything else on the Vineyard—acres of rye and beardless barley and an acre of tall, gaudy sunflowers, making a splash of color among the fields of green.

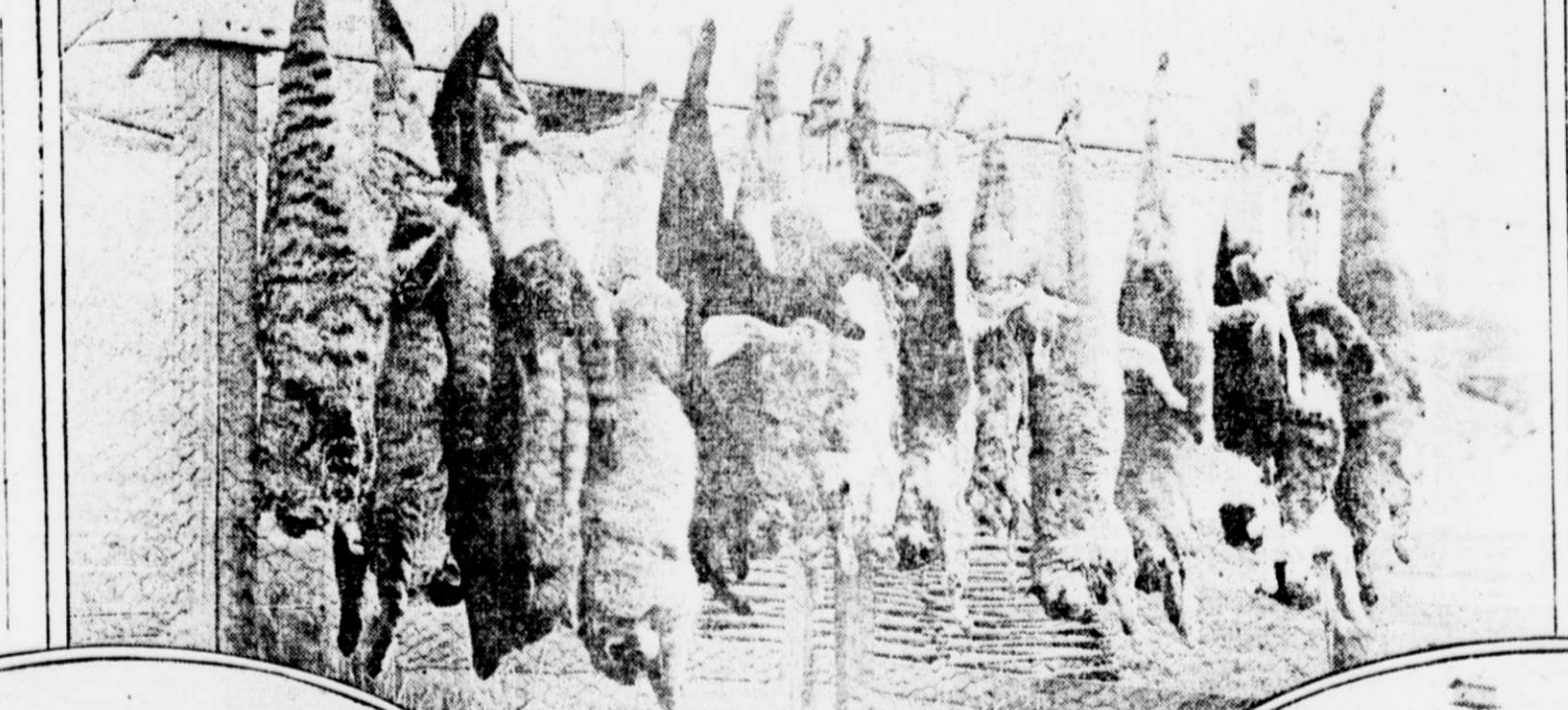
The ordinary visitor to the heath hen reserve will meet with the same impressions as the Colonel. After driving for miles through the unchanging scrub oaks, the road seems suddenly to swerve and without warning the visitor is driving in between two big stone gateposts toward a neatly painted house surrounded by bright flowers. The waste of plainland stops short and across the road is a green lawn dotted with young pine trees, bordered by a hedge. The road-way that enters the gateway is lined by carefully tended gardens; a mass of color on either side.

A step inside the hedge, a moment's survey of the landscape, and a new element enters into the picture. There is an unusual atmosphere about the State reservation and it is chiefly caused by the profusion of bird houses. There are large bird pens just inside the gateway, their corner posts surmounted by little bird houses. Poles are planted here and there, each with a little house on its top. Every telephone pole leading to the house has a little box on top for swallows, and a long deep one for flickers nailed to its side.

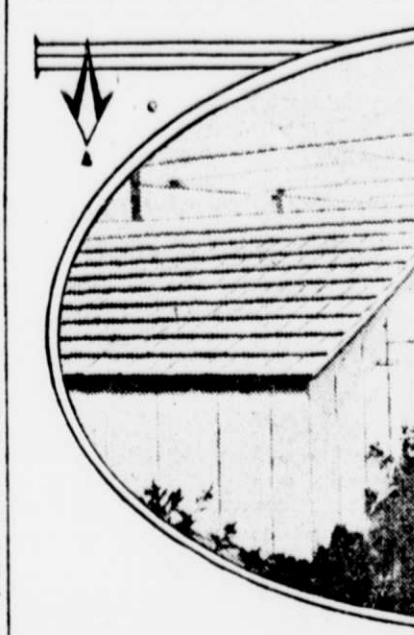
Mr. Day makes these bird houses in winter when it is impossible to work outdoors. In spring, summer and fall he and his men have all they can do to cultivate the crops which furnish food for the heath hen in winter. Last winter he planted 225 Mexican lilies in the South Shore ponds as food for wild ducks.

This year there are ten acres of corn. Mr. Day will harvest seven acres and leave the rest standing for the birds. The rye, beardless barley and sunflowers are all left out so that the birds can gather the food themselves. The sunflower is an especial delicacy.

To beautify the reservation and with the idea that their wood will be valuable in years to come, 7,000 pines were set out this spring following the successful planting of 5,000 a year ago. Some of last year's trees made a forest of wood in the year. One Scotch pine set out in 1913 grew



Some deserted pet cats, turned wild and fat on rare game birds.



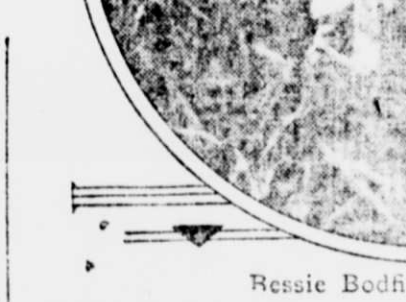
Superintendent William Day with heath hen he rescued from a hawk.

The wire fence that runs around Little Pond to keep the ducks out of the garden has a bird box on every post. The little nesting places are scattered everywhere. The white-washed posts rising helter skelter with painted boxes on their tops, some severely plain, some fashioned as little Dutch windmills, give the whole place a queer and rather fascinating aspect. It isn't Oriental, although it suggests curious ornamental gardens of China; it is decidedly original; it belongs to the State heath hen farm and nothing else.

These boxes shelter swallows, flickers, bluebirds, chickadees. They are planned and placed for every kind of feathered creature, and it would do the heart of any bird lover good to catch a glimpse of the place. In fact the heath hen farm is doing much more than cultivating this one disappearing game bird and it has won for itself the strongest commendation of the national officers of the Audubon Society.

Mr. Day makes these bird houses in winter when it is impossible to work outdoors. In spring, summer and fall he and his men have all they can do to cultivate the crops which furnish food for the heath hen in winter. Last winter he planted 225 Mexican lilies in the South Shore ponds as food for wild ducks.

This year there are ten acres of corn. Mr. Day will harvest seven acres and leave the rest standing for the birds. The rye, beardless barley and sunflowers are all left out so that the birds can gather the food themselves. The sunflower is an especial delicacy.



Ressie Bodfish, cat killer.



Heath hen on plains of Martha's Vineyard, where great efforts are being made to preserve this rare game bird.



Bird pens and houses on heath hen reservation.

twelve-months in the first year. In severe winters the heath hen will eat the buds of the evergreens, so that every year you look at them they are a good investment.

Birds the grain crops, gooseberries, raspberries and strawberries are raised for the birds. They must look very tempting to Mrs. Day as she prepares dinner and goes out at them from her kitchen window, but even if she wished she has no chance to gather any of them for the table. The heath hen has the best of the very best of the crops. No human being can compete with it in this direction. The heath hen is the farmer's friend. When a year ago the army worm was ravaging all the rest of the island the birds protected the State crops.

Birds the heath hen farm has a colony of mallard ducks and a flock of Canadian geese that have brought some long established ideas of sportsmen. First one old bird hatched a brood of nine goslings. Seven are generally regarded as the limit of a brood. Then three young goslings were found swimming round and round the pond vainly striving to find their mother. No goose in the flock would claim them and Mr. Day had to take them under his personal supervision. It is again a very rare thing for a goose to desert her family.

Little Pond, where the birds live, is used a curiosity. Although it flows away out in the plains, where water is scarce, where the vegetation is the scrubby growth of the desert, where the heath hens themselves are expected to drink only from the dew which falls in the morning, Little Pond is a never failing source of pure, clear water. What is more remarkable, it is said to be higher in dry weather than in rainy seasons. This phenomenon is mentioned by Prof. N. S. Shaler, the Harvard scientist, in some of his writings on Martha's Vineyard and although the professor seems not to have entirely made up his mind on the subject the native Vineyarders vouch for the fact.

In the fields of grain left standing through the winter and in the ponds where hay is harvested in the summer

Only a Century Ago Valuable Food Bird Was Common From Cape Ann to Virginia, Along the Coast

the heath hen comes out toward dusk to feed. Brown against the brown of the fields, only the trained eye recognizes its presence before it takes flight and flushing sweeps off in an undulating flight. It is the bird that swears its flight to the summer. Mr. Day suggests that it may have had much to do with the destruction of the bird.

A sportsman used to partridge shooting would by habit fire too quickly. When the hunter waits a second after flushing his bird he has an easy mark. The heath hen, having arisen from the ground, starts off straight as an arrow. The heath hen is a light reddish brown above, barred with black and buff. Underneath it is rusty white with brown. There are tufts of rather long black feathers at the side of the neck and on each side a large orange comb over each eye. It nests on the ground and closely resembles the Western prairie chicken, from which it was not distinguished until 1853, when the Eastern plumed grouse

many heath hens met death. Today the superintendent of the State reservation has ten miles of fire stops to look after. These are wide strips, kept clear of vegetation, that run in different directions across the plains. This reservation has its fire department too. Thus protection is afforded the birds.

Conditions in regard to the hawks, in Mr. Day's opinion, are different on Martha's Vineyard and on the mainland. While the bird is disappearing from other parts of Massachusetts it was never more plentiful on the island, and a hawk soaring over the fields or woods is an everyday sight. Marsh, red tailed, sharp shinned and cooper hawks are the most destructive to the heath hen, and the marsh hawk, which is protected by law, is the worst offender of the lot.

Meanwhile the cats and young are left exposed to the depredations of hawks and cats, of the two the cat is by far the more destructive.

Summer visitors to Oak Bluffs and other Vineyard resorts bring down cats and leave them on the island in the fall. Often the cat may be taken back, but a litter of cats born during the summer will be left behind. Then the islanders are very prone to own cats, which run wild most of the time and bring up their progeny in the woods. It is not uncommon for a cat owner who desires to get rid of a litter of young to take them out on the plains and leave them by the roadside.

The cat readily adapts itself to the open life. It runs wild and grows fat on the bird life of the plains. During his first winter Mr. Day shot twelve cats on the reservation. Last winter, however, his fellows had his gun, using up as trophies they would pass for Western wildcats. Powerful and sleek, they show beyond a doubt that they are able to take care of themselves and live luxuriously on the plains. The cat in heath hen is as heavy as to make the cat extermination an important problem.

Bessie Bodfish of Vineyard Haven is Mr. Day's able assistant in the cat hunting. Bessie is a rabbit dog and her master is Frank Bodfish. Bessie prefers life on the plains to a home in existence in a vineyard. Whenever the opportunity offers she slips out of town and hustles out to the State reservation. There she has a royal welcome. Mr. Day immediately provides a shelter and plenty of food and Bessie in turn does for the cats.

Car hunting on the heath hen plains is the only sport of the island, and possibly it would be a fair substitute for many forms of big game hunting, for some of the heath hen wildcats are tremendous snipers. Cat hunting hasn't spread as far as rabbit dog hunting. When a cat is killed, it is taken to the State reservation, where it is long enough to run down and flush the cat; then she goes back and sticks to the rabbit trail. Bessie Bodfish in fact deserves a place with Dr. Field, John E. Hayward and William Day as one of the most successful hunters to save the heath hen from extinction. She is little known, but a very important asset to the work on the State reservation.

But there are folks who object to this killing of cats. On one of the vineyard, Mr. Day saw a cat down to the island, near Nantuxet, to kill the cats which were living on the tern there. He shot six cats and had a bullet into the seventh one. The largest of the lot was no less than ten feet long, one of those killed by Mr. Day for measurement. But the same largest measured thirty-two and a half inches from nose to hind foot and had a tusk an inch and a half long. These cats are taken to the island by fishermen and left there on the fall. One of those killed by Mr. Day had been the pet at the life saving station, but it had run wild and the life savers could not get it to come near their building. The captain was only too glad to have it put out of the way. These cats and grown up on the tern which first made the island, Massachusetts, a most valiant efforts to save the disappearing tern from complete destruction, and yet seven big cats were turned loose in the birds breeding ground to live on its own.

A woman cat once wrote to the life saving station, captain asking him to feed the starving cats. She was excited over the cruelty of the fishermen who left their cats on the island in the fall. But she had no objection to the cat in the end. The cat is a little cat, looking after for itself on Martha's and Martha's Vineyard.

POWDER MAKING IN THE U. S. HISTORY OF DU PONT FAMILY

FOR the first time in a good many years the Du Ponts of Delaware, and many other places, are probably making more material intended to destroy life than material intended for use in the arts of peace. It is a popular notion that this family has been engaged for something over a century solely in making gunpowder and other explosives for use in war. As a matter of fact, from the founding of the industry at Wilmington in 1802, before Pierre Samuel du Pont de Nemours had become a permanent resident of the United States, a large part of the product was used by hunters of beasts and birds and not of men, and the proportion used in the arts of peace has pretty steadily increased up to the beginning of the present European war, though whenever the United States had wars of its own or heard the Du Ponts turned to making munitions of war in temporarily large quantities.

When Du Pont de Nemours, a pupil of the French chemist Lavoisier, who had taught France how to make cheap gunpowder, came to the United States in the year of Washington's death, it is said that Washington, having in mind preparations, talked with him of establishing the industry here. The business was founded with the consent of the Federal Government in 1802, and the head of the house of Du Pont de Nemours, radical republican and in effect since 1877, came over as a permanent resident after the escape of Napoleon from Elba made France an

unsafe place of residence for men of his stamp.

Nearly forty years later there was less than \$1,000,000 capital engaged in the American powder making business, and barely 500 workmen were employed in the manufacture. Less than ten years later the Mexican war automatically increased the business by a large amount, but even in 1850 the capital engaged was under \$2,000,000. It was nearly \$5,000,000 in 1870 and the employees numbered about 1,000.

More than ten years earlier one of the Du Ponts at Wilmington had made the discovery that was to transform the industry into one mainly ministering to the arts of peace. He found that Chilean saltpetre could be substituted for the much more costly potassium nitrate in the manufacture of explosives, and blasting powder for use in all sorts of excavations—mining, quarrying, housebuilding and the like—became an important article of manufacture at the Du Pont mills.

By 1900 the manufacture of blasting powder was far more important in ordinary times than the manufacture of gunpowder and other explosives. The use of high explosives in agriculture is also beginning to be important, and explosives of many kinds are now manufactured by the Du Ponts for all sorts of non-military uses. With the opening of the European war, military explosives again took an important place in the industry, and not only at Wilmington but in twenty other places widely

scattered all over the Union this concern is now turning out munitions of war.

It is a tradition with the Du Ponts that the members of the house take their risk of death along with their employees. Some of them have been blown up in their works, and others probably will be. All northern Delaware has long been accustomed to the periodic explosions of the mills. Those in the valley of the Brandywine above Wilmington are built with hinged roofs, so that these accidents should do as little harm as possible.

It used to be devoutly believed in Delaware that all the Du Ponts made gunpowder with their own hands, and the entire fortune of a highly prolific family was pooled in the works. Everyday folk, who had never seen a member of the family, would assert with positiveness that every cent except what went for moderately comfortable living was turned back into the works so that the Du Ponts might be richer.

Before the era of vast fortunes the Du Ponts were popularly credited with possessing untold millions. Of course they didn't. The total capital engaged in the manufacture of gunpowder and blasting powder in the United States at the opening of this century was less than \$8,500,000. That, of course, did not represent the entire riches of the Du Ponts. The close of the European war will see their fortunes further increased. When that war is over they will turn their attention again to the arts of peace.

You realize the growth of the Du Pont influence in Delaware when you reach Wilmington. Young men out

of college earnestly desire to get into the employment of the house, and scores are first great modern hotels were built by the Du Ponts, and it bears the family name. Coleman du Pont's long delayed scheme of a road from end to end of Delaware, also bearing the family name, is about to be realized.

Pierre du Pont having for brothers-in-law an alumnus of the Delaware State College, has come to the aid of that institution with money. Yesterday Delaware College was a small institution dependent mainly upon the Federal Government for its income as teaching agriculture, the mechanical arts and military tactics. Today it is potentially a large concern, with the reasonable expectation of a special endowment of \$1,000,000 for buildings and current expenses. It has taken to itself a college for women, but nearly three-quarters of a mile away from the men's college, and thanks to a gift of Mr. Du Pont, all the land between the two institutions has been purchased for a joint campus.

For the first seventy-five years of the family's residence in the United States the Du Ponts kept out of politics. Then their money was used to elect Addicks, and Col. Henry A. du Pont, who looks like a Frenchman from the Faubourg St. Germain, went to the United States Senate. The radicalism of the original Du Pont still crops out in the family. One of them was for years associated in business with Tom L. Johnson and an ardent advocate of the single tax. Another at Wilmington is of like views and has been active in promoting the single tax movement in Delaware. He ran unsuccessfully on a radical platform for Mayor of Wilmington.

The Du Ponts are a very large connection. They occupy considerable space in the Wilmington city directory and their marriages have taken them into many families of different

names. In the century of their residence in the United States they have produced many admirable men and women. Admiral S. P. de Pont has a "wreck" at Washington named for him. There have been good lawyers of the name. For the most part they have lived simply and without ostentation. They have paid their workmen the highest wages of the industry and have provided for the injured and for the families of such as were killed in the works. These manufacturers of deadly explosives seem to have caught the mildness and gravity of the quakers among whom they have lived for a century and with whom they have intermarried.

A HUMAN SEMAPHORE.

MANY schemes have been devised by those without the necessary price of admission to see the baseball games at the Polo Grounds.

While a majority of those who endeavor to see the games free believe in "safety first" methods, there still is left one "fan" who cares more about baseball than his own neck—at least some of the persons in the grand stands seem to think he does.

Every afternoon just before game time this adventurous young man climbs to his reserved seat on the elevated structure on Eighth avenue immediately behind the centre field bleachers.

To catch his acrobatic young man has to climb a perpendicular ladder of iron rungs, at the top of which is the arm of a semaphore. Apparently this stunt is not used much and is there for emergency only, which is a good thing for the young man.

How soon perched at the very tip of the signal station, he never fails to excite the curiosity of those in the grounds. In fact some spectators pay almost as much attention to the human semaphore as is paid to the ball game.

WHEN THE OTHER MAN DRIVES YOU REALIZE WHO'S MASTER

SINCE you bought and learned how to drive your own car you no longer take the sincere pleasure you once did in riding around with your friends in their cars. This is not because you are envious (or does not your eight cylinder beauty built for the road with any of them?). No, another reason has crept into your mind.

Confidentially, now, simultaneously with your learning to drive the car the consciousness rose in you that among all living drivers there is only one who really knows his business. This one, it is true, has never broken any records for fast work; neither has he spent any unreasonable time studying under old Prof. Expert Chauffeur.

But something deep down inside you, that some superhuman instinct, sometimes stands up to the other man drives is something like this: "You're coming right on though you haven't heard it—And then George came in. You know George—the big fellow with the tailored necktie. Well, George had been out to lunch and—"

You carefully restraining an impulse to take the wheel into your own hands! For the love of strawberries and cream, you overgrown suspicion, have a heart! Don't you realize you pretty near shot us over into the river? For two cents I'd—"

Young Jack, who, not being a mind reader, is happily unconscious of the semaphores signaling in your brain—so all three of us took the letter and looked it over. Pretty soon Johnson

said: "You don't look at me, run your blighted machine! Do you think I want to be backed up by that man? I better overhaul the cylinders. [To yourself as Young Jack narrowly misses a stray dog.] Look here, if you're going to come that sort of thing, I'd better let me out. I used to enjoy riding with you, but that was before I understood all about—"

Young Jack, unaware that he is interrupting your internal monologue, says, "I never did tell you how this

business came out, did I? You remember Johnson didn't want to do it, but I put it this way to Johnson. [To your horror he turns around as though you were Johnson, quite neglecting the car, which is plunging recklessly to the bottom.] "Johnson," I said—"

You (too well) need to remark it aloud, but none the less fervently: "You chattering sparrow, turn around and run your car, one inch more and we'll have mashed into that telephone pole. Be reasonable."

Young Jack, the story has been going right on though you haven't heard it—And then George came in. You know George—the big fellow with the tailored necktie. Well, George had been out to lunch and—"

You carefully restraining an impulse to take the wheel into your own hands! For the love of strawberries and cream, you overgrown suspicion, have a heart! Don't you realize you pretty near shot us over into the river? For two cents I'd—"

Young Jack, who, not being a mind reader, is happily unconscious of the semaphores signaling in your brain—so all three of us took the letter and looked it over. Pretty soon Johnson

said: "You don't look at me, run your blighted machine! Do you think I want to be backed up by that man? I better overhaul the cylinders. [To yourself as Young Jack narrowly misses a stray dog.] Look here, if you're going to come that sort of thing, I'd better let me out. I used to enjoy riding with you, but that was before I understood all about—"

Young Jack, unaware that he is interrupting your internal monologue, says, "I never did tell you how this

business came out, did I? You remember Johnson didn't want to do it, but I put it this way to Johnson. [To your horror he turns around as though you were Johnson, quite neglecting the car, which is plunging recklessly to the bottom.] "Johnson," I said—"

You (too well) need to remark it aloud, but none the less fervently: "You chattering sparrow, turn around and run your car, one inch more and we'll have mashed into that telephone pole. Be reasonable."

Young Jack, the story has been going right on though you haven't heard it—And then George came in. You know George—the big fellow with the tailored necktie. Well, George had been out to lunch and—"

You carefully restraining an impulse to take the wheel into your own hands! For the love of strawberries and cream, you overgrown suspicion, have a heart! Don't you realize you pretty near shot us over into the river? For two cents I'd—"

Young Jack, who, not being a mind reader, is happily unconscious of the semaphores signaling in your brain—so all three of us took the letter and looked it over. Pretty soon Johnson

said: "You don't look at me, run your blighted machine! Do you think I want to be backed up by that man? I better overhaul the cylinders. [To yourself as Young Jack narrowly misses a stray dog.] Look here, if you're going to come that sort of thing, I'd better let me out. I used to enjoy riding with you, but that was before I understood all about—"

Young Jack, unaware that he is interrupting your internal monologue, says, "I never did tell you how this